

**REMARKS**

**I. Status of the claims**

Claims 1 and 2 are cancelled without prejudice or disclaimer. Claims 29-30 and 32 are amended to limit “a fluorescent protein having chemiluminescence activity” to “the fluorescent protein having chemiluminescence activity according to claim 6”. Exemplary support for the amendments can be found throughout the specification, for instance, at page 11 of the as-filed application. Claims 13, 17, 18, and 23 are amended to correct minor typographical errors. The title is amended to reflect the subject matters of the present application. Accordingly, these amendments do not add any new matter.

**II. Restriction Requirement**

According to the Office, pending claims 1-26 and 29-34 are directed to twelve patentably distinct inventions:

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|------------|--|
| Group I:   | Claims 1, 2, 6-16, 17, 27 and 29, drawn to a fluorescent protein having a chemiluminescent activity; |
| Group II:  | Claims 33-44, drawn to a fluorescent protein;  |
| Group III: | Claims 5 and 19, drawn to a conjugate comprising a fluorescent protein with a ligand;                |
| Group IV:  | Claims 3, 4 and 18, drawn to a method of detecting a target substance;                               |
| Group V:   | Claims 20-21 and 28, drawn to a method of enhancing thermal stability of a fluorescent protein;      |
| Group VI:  | Claims 22-26, 27 and 32, drawn to a chemiluminescent method and a kit;                               |
| Group VII: | Claims 29 and 31, drawn to a method of producing a fluorescent protein;                              |

- Group VIII. Claim 30, drawn to a method of producing a fluorescent protein;
- Group IX. Claim 32, drawn to a method of producing a fluorescent protein;
- Group X. Claims 44-46, drawn to a method of detecting calcium ion;
- Group XI. Claims 47-53 and 55-56, drawn to a method of producing a calcium binding photoprotein; and
- Group XII. Claim 54, drawn to a method of detecting a target substance.

Office Action, pages 2-3.

Applicant provisionally elects to prosecute the subject matter of Group I, claims 1, 2, 6-16, 17, 27, and 29, without traverse.

Regarding claim 29, Applicant notes that the Office has included it in both Group I and Group VII, clarification of the record is thus respectfully requested.

Finally, Applicant respectfully requests that the Office rejoin and fully consider all method claims upon finding the product claims allowable. M.P.E.P. § 821.04.

### III. **Election of Species Requirement**

The Office further requires election of a single disclosed species for each of the following:

- (1) apoprotein;
- (2) coelenteramid;
- (3) coelectrazine; and
- (4) an ion that can be substituted for calcium ion.

Office Action, pages 5-6. In response, Applicant elects:

- (1) **apoequorin** as apoprotein;
- (2) **coelenteramid**, described in upper left on page 33 of the as-filed

application, as coelenteramid;

(3) **coelenterazine**, described in upper right on page 33 of the as-filed application, as coelectrazine; and

(4) **calcium ion** as an ion that can be substituted for calcium ion.

Applicant further submits that claims 1, 2, 9, 13, 14-17, 27, and 29 read on the elected species.

Upon finding the elected species free of the art, Applicant respectfully requests that the Office extend its search to the non-elected species.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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